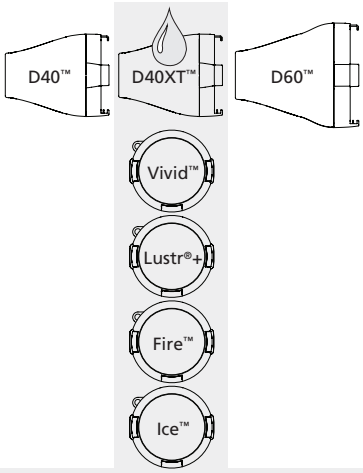
ETC®

D40XT™

Desire™ Series

100V 115/120V 230/240V



This datasheet covers D40XT fixtures as shown.
See other datasheets for other versions.

GENERAL INFORMATION

ETC's Desire Series D40XT puts the seven-color x7 system into a round theatrical wash light fully sealed and rated for IP66 outdoor use. The Selador® x7 Color System™ produces the widest range of spectrally-balanced saturated and tinted color choices available. The D40XT offers a rugged die-cast enclosure, noiseless fan-free operation, multiple lens options and advanced user interface. Its watertight construction makes it ideal for outdoor events and installations.

D40XT LED ARRAY OPTIONS

D40XT fixtures are based on the x7 Color System that uses seven different LED colors to achieve true, usable broad-spectrum color. The D40XT luminaire is available with any one of the following x7 color arrays to best suit the intended application.

- D40XT Vivid™ – the x7 Color System array balanced for best all-around use as a color-changing wash fixture
- D40XT Lustr+™ – optimized with six colors plus high-intensity white LEDs to create an ideal front light wash fixture. Full range color, with an emphasis on lighter colors and white.
- D40XT Ice™ – uses the cool colors of the x7 System to provide extra-high brightness color in the blue end of the spectrum
- D40XT Fire™ – uses the warm colors of the x7 System to provide extra-high brightness color in the red end of the spectrum

ORDERING INFORMATION

Selador D40XT

MODEL	DESCRIPTION
SELD40VO	D40 Vivid wash fixture – for high-intensity color mixing across the spectrum for widest color wash use
SELD40LO	D40 Lustr+ front light wash fixture – optimized for skin tones and light tints for use as a theatrical front light

Note: Unit ships with basic yoke and attached power leads equipped with water-tight Molex connectors. Adaptors from Molex connectors to other in and thru power connectors must be purchased separately. Order c-clamp separately.

Other D40XT Versions

SELD40FO	D40 Fire special wash fixture – limited palette, high brightness in the red (warm) end of the spectrum
SELD40IO	D40 Ice special wash fixture – limited palette, high brightness in the blue (cool) end of the spectrum

SELD40 VO – 0X

D40 Model Prefix

Color Mix
V = Vivid 7-color standard wash
L = Lustr+ front light wash variant
F = Fire variant
I = Ice variant

Usage Rating
I = IP20 (interior)
O = IP66 (exterior)

Finish Options
0 = Black (standard)
1 = White
5 = Silver or other custom color (Contact factory)

Connector Options
Note: All XT fixtures are equipped with 39" outdoor-rated power leads with integral watertight Molex connectors. Order optional DPA-M power input lead to adapt to other connectors.

SPECIFICATIONS

GENERAL

- 40 X 2.5W LED variable color-mixing light wash fixture
- ETL listed to UL1573 – the standard for stage and studio lighting units
- IP66-rated for exterior wet location use
- Power and DMX in/thru connections for easy setup
- User-friendly control interface with multiple modes and fixture settings

PHYSICAL

- Rugged die-cast all-metal housing
- Easy access slots for secondary lenses and standard 7.5" PAR accessories
- Available in black (standard), white or silver (optional) or custom colors (contact factory)
- Hanging yoke standard. Optional yoke/floor stand available

ELECTRICAL

- 100VAC to 240VAC 50/60 Hz universal power input
- Waterproof, 39"power in and thru outdoor rated power leads
- Up to 10 fixtures may be linked via power in/thru connections per 15A circuit
- Requires power from a non-dim source

LED*

- 50,000 hour LED life (50,000 hours to 70% intensity)
- 40 Luxeon® Rebel 2.5W LED emitters

*See additional LED notes on page three

COLOR

- Exclusive *x7 Color System*™ seven-color LED array
- Broad spectrum color interacts seamlessly with conventional sources
- Beautifully illuminates skin tones and other objects for natural appearance and high color rendering
- Exclusive red-shift option emulates tungsten dimming performance

OPTICAL

- Primary field angle of 17° and beam angle of 8°
- Secondary lenses available for multiple beam spread options
- Sealed, factory-installed lenses available for permanent installations (special order)
- Lenses must be ordered separately
- Refer to accessories chart for lenses available

CONTROL

- DMX512 in and thru via watertight five-pin XLR connectors on 39" leads
- Multiple control options including RGB, strobe, and console-free Master/Slave mode
- See DMX Control Table for additional information
- 15-bit virtual dimming engine provides smooth, high quality theatrical fades and minimizes color shift during dimming
- RDM functionality for address and setting changes

THERMAL

- Ambient operating temperature of -4° to 104°F (-20° to 40°C)
- Active electronic thermal management for droop-free operation
- Noiseless, fan-free convection cooling for acoustically sensitive installations
- Fixture is designed for continuous operation up to 104°F (40°C) ambient temperature and requires free flow of air around fixture housing

ADDITIONAL ORDERING INFORMATION

Power Input Cables

Use information below to order 5' power input leads with factory fitted connectors. Desire D40XT and D40XT Studio™ luminaires ship with 39" outdoor-rated power leads and integral watertight Molex connectors. Order optional DPA-M power cable to adapt to other input connectors

MODEL	DESCRIPTION
DPAM-5*	XT Outdoor UL Power Lead – 1M Molex Female to bare end
DPAM-25*	XT Outdoor UL Power Lead-Long – 25' Molex Female to bare end

*Not included with fixture

Power Pass Thru

DPJM-5	XT Outdoor UL 5' Molex to Molex Extension
DPJM-10	XT Outdoor UL 10' Molex to Molex Extension

Fixtures Accessories

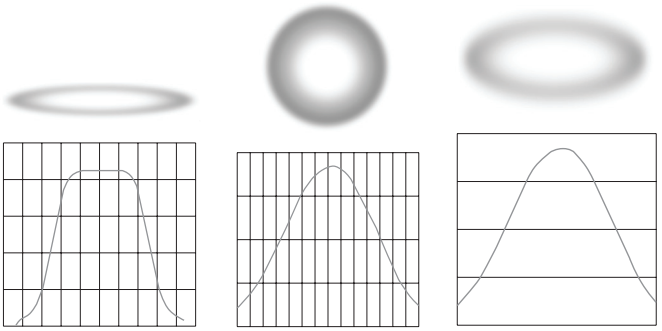
MODEL	DESCRIPTION
SELD40FSY	Yoke with floor stand attachment
400BD	Barn door (Use only as a flexible top hat to diminish aperture glare. Not for beam shaping)
407CF	Color Frame (use for round and oblong lenses)
400L	Egg Crate Louver
400PTH3	Top Hat 3" Tube
400PTH6	Top Hat 6" Tube
400PHH	Half Hat 6" Tube
400CC	C-Clamp (does not ship with fixture)
400SC	Safety Cable (32")

ADDITIONAL ORDERING INFORMATION

Secondary Lens Options

MODEL	DESCRIPTION: The following lenses are cut for D40 fixtures and create round, linear or oblong field patterns as described below. These lenses are not for use in Selador® Classic (Vivid™, Lustr®, Paletta™, etc.) fixtures.	
Narrow Linear Field	Note: This is the same material as Selador Classic lenses	
SELL20-7.5	7.5" 20° lens (narrow linear field)	Linear lenses may be combined to create desired field size, i.e. 40° X 60°
SELL30-7.5	7.5" 30° lens (narrow linear field)	
SELL40-7.5	7.5" 40° lens (narrow linear field)	
SELL60-7.5	7.5" 60° lens (narrow linear field)	
SELL80-7.5	7.5" 80° lens (narrow linear field)	
Round Field	Any one of the following round lenses may be installed permanently in the fixture at the factory as a special order	
SELR25-7.5	7.5" 25° lens (round field)	
SELR35-7.5	7.5" 35° lens (round field)	
SELR45-7.5	7.5" 45° lens (round field)	
SELR75-7.5	7.5" 75° lens (round field)	
Oblong Field		
SELO2040-7.5	7.5" 20° x 40° lens (oblong field)	
SELO3070-7.5	7.5" 30° x 70° lens (oblong field)	
SELO3580-7.5	7.5" 35° x 80° lens (oblong field)	

Typical Lens Field Profiles



Narrow Linear Round Oblong

Power Consumption at Full Intensity

MODEL	VOLTAGE (V)	CURRENT (A)	WATTS
D40XT	120 / 240	1 / .5	110

NOTES ABOUT LED LUMINAIRES

All LED sources experience some lessening of light output and some color shift over time. LED output will vary with thermal conditions. Based on the LED manufacturer's B50 L70 specification, a Selador luminaire will achieve ~70% of its initial output after 50,000 hours of typical usage. In individual situations, LEDs will be used for different durations and at different levels. This can eventually lead to minor alterations in color performance, necessitating slight adjustment to presets, cues or programs.

CRI AND CQS RATINGS

Desire fixtures were evaluated for CRI and CQS performance using measured output spectrum and optimized mix solutions for a best spectral match to black body sources at 3200K and 5600K.

Fixture	CRI	CQS	Color Fidelity	Duv
D40 Vivid™ at 3200K	87	89	89	0.000
D40 Vivid at 5600K	90	92	92	0.000
D40 Lustr+™ at 3200K	86	88	88	0.000
D40 Lustr+ at 5600K	93	92	90	0.000
D40 Studio HD™ at 3200K	89	90	91	0.000
D40 Studio HD at 5600K	92	94	94	0.000
D40 Studio Daylight™ at 5600K	71	70	69	0.001
D40 Studio Tungsten™ at 3000K	86	86	86	0.001

All D40™ luminaire versions provide excellent color rendering, particularly at the higher color temperature 5600K. In most cases the Duv was 0.000. A Duv rating of 0.000 indicates that the color mix used was exactly on the black body line, with no green or magenta tint. .

CONTROL OPTIONS

User settings on D40XT fixtures allow multiple operational modes and settings for either console operation via DMX protocol or stand-alone operation. The expanded LCD display provides easy navigation to all possible settings and choices. Some of the setting options are:

- Multiple DMX options ranging from a simple RGB profile – which effectively controls all seven LED colors via three channels – to nine-channel 'direct' color and intensity control
- Multiple dimming curve options
- Preset colors and sequences for stand-alone (no console required) operation
- White point selection – white light and color behavior based on a specific color temperature white light, i.e. 3200K, 5600K, etc
- Loss of data behavior options – instant off, hold last look for two minutes, etc.
- Output modes – Three output options that offer the user a choice between maximum output and maximum consistency

See the user manual for a complete explanation of all of the control settings and options for the D40XT.

Quick Setups

To assist in managing the numerous control and fixture behavior choices, five combinations of operational settings are available to quickly get started. These settings are specifically created for different applications and are easily accessible at the fixture display. Each setting can then be modified as required to take advantage of all of the possible control features.

Setting Title	Profile	Description	Typical Features*
General	Direct	Factory Default: For general purpose use including interior architectural applications	• Standard dimming curve • Regulated output for color consistency
Stage	HSI Plus 7 Enabled	Theatrical lighting: Duplicates the color and dimming behavior of tungsten stage lighting fixtures.	• Incandescent dimming curve • Regulated output for color consistency • 3250K white point setting
XT Arch	HSI	Exterior Architectural lighting: Provides a high degree of color consistency in high ambient temperature environments.	• Standard dimming curve • Protected output • 3200K white point setting
High Impact	RGB	Event lighting: Enables quickest response, simple RGB control and strobe channel for maximum effect usage	• Quick dimming curve • Boost mode for maximum intensity • 5600K white point setting
Studio	Studio	Video/film lighting: Enables three parameter control of white light (intensity, white point, and tint) via DMX from console or from fixture display – no console required	• Linear dimming curve • Regulated output mode for color consistency

*See user manual for complete list of features for each Quick Setup

CONTROL OPTIONS

DMX Input Channel Profiles

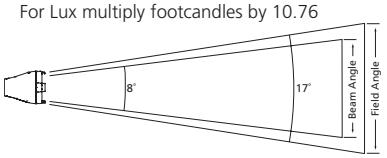
DMX Profile	DMX Channels	Channel Assignments	Notes
Direct	9	1 – Red 2 – Orange (white if Lustr+) 3 – Amber 4 – Green 5 – Cyan 6 – Blue 7 – Indigo 8 – Intensity 9 – Strobe	Direct control of each individual color with a separate master intensity channel. Color calibration of LEDs is not active in this mode. The nine-channel profile will produce the highest quality color cross-fades.
HSI	5	1 – Hue (coarse) 2 – Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe	High resolution hue (two-channels), saturation, and intensity control. HSI mode will produce arbitrary color cross-fades around the color space.
HSIC	6	1 – Hue (coarse) 2 – Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe 6 – Color Point (CCT)	High-resolution hue, saturation and intensity control as above, with the addition of a color point channel to adjust the color temperature of the fixture in both white light and color. Color cross-fade performance is the same as EHSI.
RGB	5 (Ch. 4 not used)	1 – Red 2 – Green 3 – Blue 4 – n/a 5 - Strobe	Effectively addresses all seven colors via three channels of control. RGB profile will produce medium quality color cross-fades
Studio	3	1 – Intensity 2 – Color Point (CCT) 3 – Tint	Controls fixture as a white light unit. If no DMX, i.e. console input, is present, fixture can be adjusted for these three parameters on the U/I at the back of the unit.
Additional profile options			
Plus 7		Seven additional color control channels are available in RGB, HSI, HSIC, and Studio profile settings. For example HSI with 'Plus 7' enabled becomes a 14-channel profile:	
		1 – Hue (coarse) 2 – Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe 6 – n/a 7 – Plus 7 Control on/off 8 – Red 9 – Orange (white if Lustr+) 10 – Amber 11 – Green 12 – Cyan 13 – Blue 14 – Indigo	The desired color and intensity is achieved by using the HSI or RGB channels. Placing channel seven at a value over 51% gives the fixture a 14-channel profile. Channels 8-14 represent the native colors of the fixture and allow the operator to adjust individual color channels to fine tune the color output.
Strobe		Variable strobe control: 0% is no strobe. The fixture output will strobe more rapidly as the strobe channel value approaches 100%.	

PHOTOMETRICS

D40XT Vivid™

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - Cold	17˚	101,900	2,540	1,200	26.7
Regulated	17˚	87,200	2,150	1,020	26.5

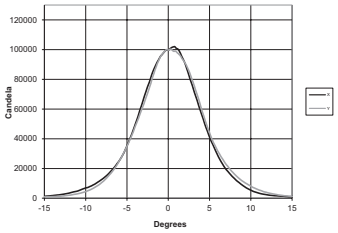
Metric Conversions: For Meters multiply feet by .3048
For Lux multiply footcandles by 10.76



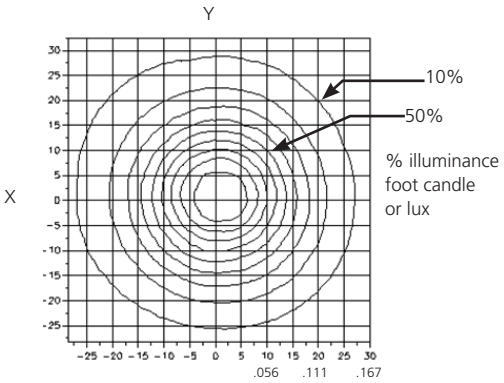
Throw Distance (d)	10.0′ 3.0m	15.0′ 4.6m	20.0′ 6.1m	25.0′ 7.6m	319′ 97m
Field Diameter	3.1′ 0.9m	4.6′ 1.4m	6.2′ 1.9m	7.7′ 2.3m	–
Illuminance (fc)	1,1019	453	255	163	1
Illuminance (lux)	10,968	4,875	2,742	1,755	10.76

For field diameter at any distance, multiply distance by .308
For beam diameter at any distance, multiply by 0.145

Cosine Candela Plot



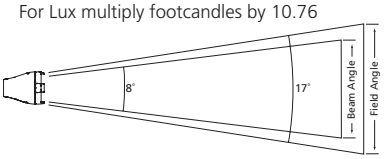
Iso-Illuminance Diagram
(Flat Surface Distribution)



D40XT Lustr+™

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - Cold	17˚	121,500	2,980	1,450	30.3
Regulated	17˚	109,100	2,680	1,300	29.8

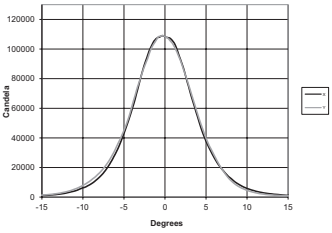
Metric Conversions: For Meters multiply feet by .3048
For Lux multiply footcandles by 10.76



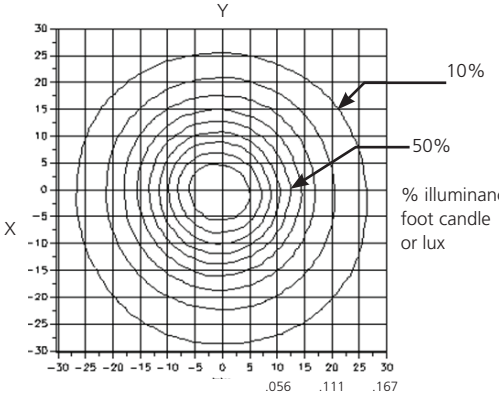
Throw Distance (d)	10′ 3.0m	15.0′ 4.6m	20.0′ 6.1m	25.0′ 7.6m	348′ 106m
Field Diameter	3.0′ 0.9m	4.5′ 1.4m	6.0′ 1.8m	7.5′ 2.3m	–
Illuminance (fc)	1,215	540	304	194	1
Illuminance (lux)	13,078	5,813	3,270	2,093	10.76

For field diameter at any distance, multiply distance by .301
For beam diameter at any distance, multiply by 0.145

Cosine Candela Plot



Iso-Illuminance Diagram
(Flat Surface Distribution)

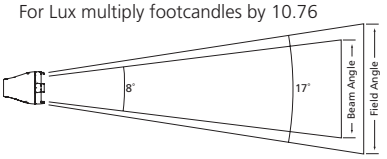


PHOTOMETRICS

D40XT Fire™

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - Cold	17˚	94,900	2,540	1,200	28.7
Regulated	17˚	82,500	2,220	1,040	26.5

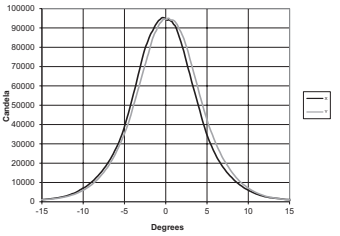
Metric Conversions: For Meters multiply feet by .3048
For Lux multiply footcandles by 10.76



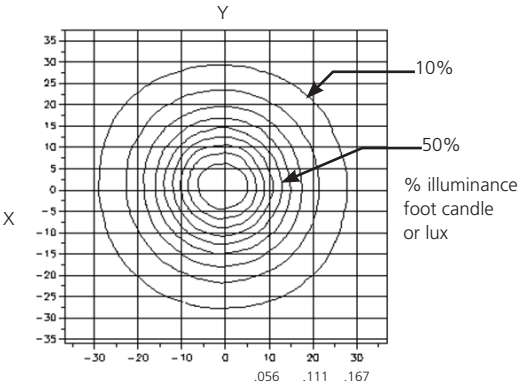
Throw Distance (d)	10.0′ 3.0m	15.0′ 4.6m	20.0′ 6.1m	25.0′ 7.6m	308′ 93m
Field Diameter	3.2′ 1.0m	4.8′ 1.5m	6.4′ 1.9m	8.0′ 2.4m	–
Illuminance (fc)	949	422	237	152	1
Iluminance (lux)	10,215	4,540	2,554	1,634	10.76

For field diameter at any distance, multiply distance by .318
For beam diameter at any distance, multiply by 0.148

Cosine Candela Plot



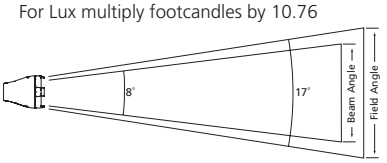
Iso-Illuminance Diagram
(Flat Surface Distribution)



D40XT Ice™

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - Cold	17˚	70,900	1,830	890	18.1
Regulated	17˚	63,200	1,630	790	18.0

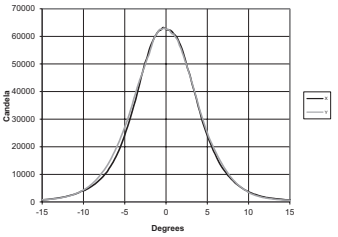
Metric Conversions: For Meters multiply feet by .3048
For Lux multiply footcandles by 10.76



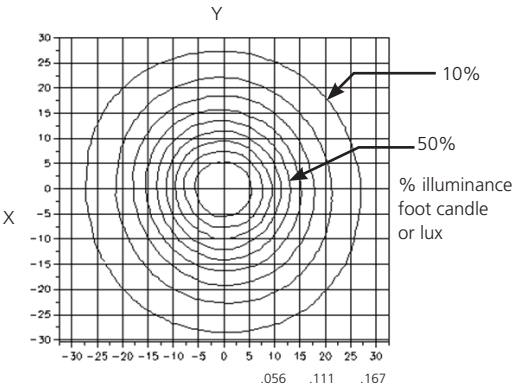
Throw Distance (d)	10.0′ 3.0m	15.0′ 4.6m	20.0′ 6.1m	30.0′ 9.1m	266′ 81m
Field Diameter	3.1′ 0.9m	4.6′ 1.4m	6.2′ 1.9m	9.3′ 2.8m	–
Illuminance (fc)	709	315	177	79.78	1
Illuminance (lux)	7,632	3,392	1,908	848	10.76

For field diameter at any distance, multiply distance by .310
For beam diameter at any distance, multiply by 0.147

Cosine Candela Plot



Iso-Illuminance Diagram
(Flat Surface Distribution)



Throw Distance Multiplier (TDM)

To determine the distance from the center of the beam (Origin) to a certain illuminance level at a particular distance, multiply the desired throw distance by the TDM desired on the Iso-Illuminance diagram.

Throw Distance (TD) x Throw Distance Multiplier (TDM) = Distance from the Origin (DfO) (distance from the | center of the beam)

Example: 25 feet (TD) x 0.047 (TDM) = 1.175 feet from center of beam (DfO)

For illumination with any lamp, multiply the candlepower of a beam spread by the multiplying factor (mf) shown for that lamp.

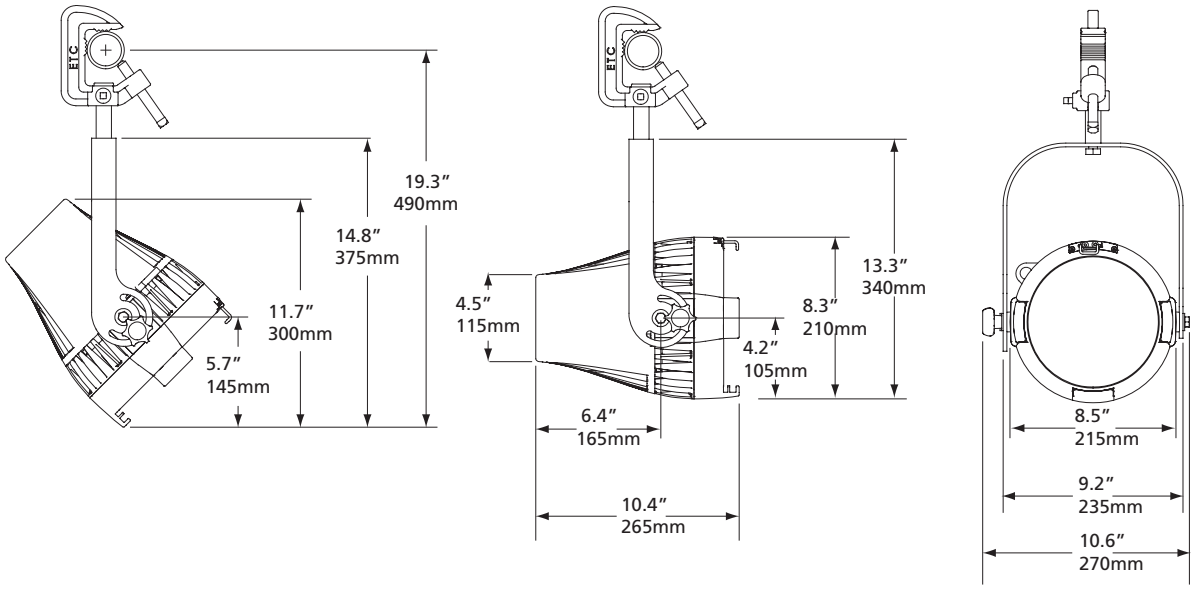
To determine illumination in footcandles or lux at any throw distance, divide candlepower by distance squared.

PHYSICAL

Selador D40XT Weights and Dimensions

WEIGHT*		SHIPPING WEIGHT	
lbs	kgs	lbs	kgs
14	6.4	17	7.8

* Does not include mounting hardware



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